REMARKS

Claims 1, 4-17, 19 and 26 are pending in the application. Withdrawn claims 20-23 and 25 have been canceled without prejudice or disclaimer. Claim 1 has been amended to recite that the complex of a phosphorylated lipophilic pharmaceutically acceptable compound comprises a complexing agent selected from the group consisting of arginine, lysine, and laurylaminodipropionic acid. Support for these amendments can be found at least at paragraphs [0034]-[0039] of the published application (page 7, lines 8-33 of the application as filed). No new matter has been added.

Applicants additionally request entry of the amended paragraphs of the specification, which replace the previously amended paragraphs with those from the specification as originally filed. Accordingly, the amendments do not introduce any new matter.

Objections to the Specification

The amendments to the specification filed in the previous response were objected to under 35 U.S.C. § 132(a) as introducing new matter.

Without acquiescing to the rejection and solely to expedite prosecution, Applicants have amended the specification to revert back to the original language of the application as filed. Withdrawal of the objection is respectfully requested.

Rejections Under 35 U.S.C. § 112

Claims 1, 4-12, 14-17, 19 and 26 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner contends that the claimed subject matter is not sufficiently described in the specification to convey possession of the claimed subject matter, at the time the application was filed, to one of skill in the art.

Applicants respectfully disagree with the basis of the rejection and believe that the previously presented claims meet the requirements of 35 U.S.C. § 112. Nevertheless, without acquiescing to the rejection and solely to expedite prosecution, Applicants have elected to amend claim 1 to relate to a complexing agent selected from arginine, lysine and laurylaminodipropionic acid. Each of these complexing agents is explicitly supported by the application as filed, as described above. Claims 4-12, 14-17, 19 and 26 depend either directly or ultimately from claim 1, and are therefore satisfy the written description requirement for at

least the same and similar reasons. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejections Under 35 U.S.C. § 102

Claims 1, 4, 12, 17 and 26 have been rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by U.S. Patent Application No. 2004/0131569 to Schneider *et al.* ("Schneider"). The Examiner asserts that "Schneider et al. teaches the method of incorporating one or more water-soluble vitamin E derivatives including lauryl imino dipropionic acid tocopheryl phosphate and disodium lauriniminodipropionate [sic] tocopheryl phosphates, to improve skin cell renewal/exfoliation (abstract,[15-24], claim 1,11,23, 25-26) which are immediately envisioned, and the incorporation of skin benefiting agents such as anti-inflammatories and/or antiirritant agents [36-37]." Office Action at pages 9-10.

Applicants respectfully traverse the rejection and submit that Schneider does not anticipate the pending claims.

Claim 1, as amended, recites the following (with emphasis added):

> **A method for improving the efficacy and/or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds**, said method comprising the step of incorporating the pharmaceutical or pharmacologically active compound in a carrier comprising an effective amount of one or more complexes of a phosphorylated lipophilic pharmaceutically acceptable compound;
>
> wherein the lipophilic pharmaceutically acceptable compound is selected from the group consisting of tocopherol, vitamin A (retinol), vitamin K (menadione), tocotrienols, vitamin D (calciferol) and mixtures thereof; and
>
> wherein the complex of a phosphorylated lipophilic pharmaceutically acceptable compound is prepared from a complexing agent selected from the group consisting of arginine, lysine, and laurylaminodipropionic acid.

It is well-settled that in order to anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either expressly or inherently. *In re Schreiber*, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed.Cir.1997). Applicants submit that Schneider does not disclose a method of improving the efficacy or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds, as claimed. As the Examiner admits, Schneider is directed to methods of enhancing the rate of skin cell renewal of exfoliation. While Schneider mentions that additional skin benefiting agents may optionally be included, Schneider does not disclose any improvement in efficacy or transdermal transport of such compounds.

Schneider also does not disclose the incorporation of a pharmaceutical or pharmacologically active compound in to a carrier comprising an **effective amount** of one or more complexes of a phosphorylated lipophilic pharmaceutically acceptable compound, to improve the efficacy and/or transdermal transport of the pharmaceutical or pharmacologically active compound. As described in MPEP 2112(IV), "(t)he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993)." Furthermore, "(t)o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999, internal citations omitted).

In summary, Schneider does not disclose a method of improving the efficacy and/or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds, as recited in pending claim 1, and therefore does not anticipate the claim. Claims 4, 12, 17 and 26 depend from claim 1, and therefore are not anticipated for at least the same and similar reasons.

Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 1 and 5-11 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over Schneider. The Examiner concedes that "Schneider does not expressly teach the recited ranges of phosphorylated lipophilic compound....but does teach it in the range of preferably 0.05% to about 30% which either encompass the recited range or overlaps them (about 30% encompasses the recited 40%, 45%, and 50%)" (Office Action at page 11).

For at least the same and similar reasons as those addressed above, Applicants submit that Schneider does not teach or suggest a method of improving the efficacy and/or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds, as recited in pending claim 1. Accordingly, claim 1 is not obvious over Schneider. Claims 5-11 depend either directly or ultimately from claim 1, and therefore are also not obvious for at least the same and similar reasons.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1, 4-12, 17 and 26 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U.S. Patent No. 6248779 to Shimizu *et al.* ("Shimizu"). The Examiner argues that "Shimizu et al. teaches the method of incorporating vitamin E and squalane to compositions to improve its efficacy in topical administration of adrenocortical hormones and nonsteroidal anti-inflammatory agents for dermatoses and has reduced side effects (Abstract). Shimizu teaches that 'vitamin E' is defined to include tocopherol forms including tocopherol phosphate" (Office Action at page 12).

Applicants respectfully traverse the rejection and submit that the claims are not obvious over Shimizu.

Shimizu teaches "an external preparation for the treatment of dermatoses which has an efficacy at least equivalent to that of external preparations containing an adrenocortical hormone as an active ingredient and which produces only reduced adverse effects." Shimizu at column 2, lines 12-16. Such preparations include vitamin E and squalane as synergistic active agents. However, Shimizu does not teach incorporation of a pharmaceutical or pharmacologically active compound in a carrier comprising a phosphorylated lipophilic pharmaceutically acceptable compound and **a complexing agent selected from arginine, lysine and laurylaminodipropionic acid**, as recited in pending claim 1.

Furthermore, as with Schneider, Applicants submit that nothing in Shimizu teaches or suggests a method of improving the efficacy and/or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds by incorporating a pharmaceutical or pharmacologically active compound in a carrier comprising a phosphorylated lipophilic pharmaceutically acceptable compound and a complexing agent, as recited in pending claim 1. In fact, Shimizu expressly teaches that, in addition to the active agents, the composition can include transdermal absorption enhancers. The possible transdermal absorption enhancers are extensively described starting at column 3, line 27 and proceeding all the way through column 4, line 61. See also: column 7, line 33 through column 8, line 52; column 10, line 22 through column 11, line 41; column 12, line 66 through column 14, line 17; and column 15, line 30 through column 16, line 49. None of the disclosed transdermal absorption enhancers comprise vitamin E. Further, such focus on additional transdermal absorption enhancers suggests that the base compositions of vitamin E and squalane may not be particularly well-absorbed. Accordingly, one of skill in the art, when viewing Shimizu, would not have expected vitamin E alone to improve the efficacy and/or transdermal transport of a topically administered compound such as squalane.

In summary, Applicants submit that Shimizu does not teach or suggest a method for improving the efficacy and/or transdermal transport of topically administered pharmaceuticals and pharmacologically active compounds, comprising incorporating the pharmaceutical or pharmacologically active compound in a carrier comprising an effective amount of one or more complexes of a phosphorylated lipophilic pharmaceutically acceptable compound and a complexing agent. Accordingly, claim 1 is not obvious over Shimizu. Claims 4-12, 17 and 26 depend either directly or ultimately from claim 1, and therefore are also not obvious for at least the same and similar reasons.

Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1 and 19 have been rejected under 35 U.S.C. § 103(a) as allegedly being obvious Shimizu in view of "Steroid hormone biosynthesis" by Brandt ("Brandt"). The Examiner concedes that "Shimizu does not expressly teach the incorporation of morphine, atropine, estradiol, or testosterone," but asserts that "Brandt teaches that the adrenal cortex produce three classes of steroid hormone and their derivatives include estradiol and testosterone (Page 3)." Office Action at page 13.

As addressed above, Applicants submit that Shimizu does not teach or suggest the method recited in pending claim 1. Brandt does not remedy this deficiency. Accordingly, claims 1 and 19 are not obvious over Shimizu for at least the same and similar reasons.

Reconsideration and withdrawal of the rejection are respectfully requested.

CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance. Favorable consideration of the present application as amended is therefore respectfully requested. If a conference call would be useful in resolving issues arising from the filing of this communication, please contact the undersigned at the below-noted number.

Respectfully submitted,

/anne m reynolds/

Anne M. Reynolds, Ph.D.
Reg. No. 65,455

Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Suite 3300
Milwaukee, Wisconsin 53202-4108
414.271.6560